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# JOINT COLLOQUIUM

**Feb 15 (Tue), 2022**

## **The Present and Future of Gravitational Wave Astrophysics: A Summary of Team Taiwan**

Albert Kong

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**Abstract:**

The breakthrough detection of gravitational wave by LIGO in 2015 has revolutionised our understanding of the universe. This not only confirms the existence of gravitational waves, they also provide direct evidence of binary black hole systems. Since then, 90 gravitational wave events have been found by LIGO and Virgo. In 2020 April, the Japanese underground gravitational wave detector, KAGRA, conducted the first observing run. Taiwan has played a significant role in the KAGRA collaboration and we are leading some of the key developments. LIGO, Virgo, and KAGRA will start the next joint observing run from 2022 December after an upgrade of the instruments. In this talk, I will summarise some of the key results in previous 3 observing runs and contributions from Taiwan.

**Bio:**

Dr. Albert Kong is a Distinguished Professor at the Institute of Astronomy of National Tsing Hua University. He obtained his PhD at the University of Oxford and worked as a postdoc at Harvard-Smithsonian Center for Astrophysics and MIT. His main research interests focus on high-energy astrophysics and multi-messenger astronomy. Since his return to Asia in 2007, Albert has been working on innovative research to understand the physical nature of cosmic gamma-ray sources using a multi-wavelength approach. He was awarded the Outstanding Research Award of the Ministry of Science and Technology in 2015 and was elected as a Fellow of the Physical Society of Taiwan in 2018. Since 2017, Albert has led the effort in Taiwan to participate in the Japanese underground gravitational wave experiment, KAGRA.



Host: Jiun-Huei Protty Wu  
Time: 2:20 pm - 3:20 pm  
Place: Room 104, CCMS-New Phys. building